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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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David Andrew Horsnell

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EXAMINER

WIECZOREK, MICHAEL P

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

01/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,007	Applicant(s) HORSNELL ET AL.	
	Examiner Michael Wieczorek	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8, 9 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 5-7, 10-12 and 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Objections

1. Claims 5-7, 10-12, 17-19 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim.

See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wen (U.S. Patent # 6,428,157).

Wen teaches a method where an ink image 140 is applied or printed onto a carrier sheet or receiver 80 followed by applying a cover coat or polymer overcoat film 130 over the image 140 (Column 5 Lines 6-16). Wen teaches that the image 140 was applied using an Epson Color Stylus 900 printer and that the overcoat film 130 was applied using an Epson Color Stylus 200 printer. Both of these printers are known and commercially available drop on demand ink jet printers.

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In the case of claims 13 and 14, as was discussed above, Wen teaches coating a carrier sheet or receiver 80 comprising an image 140 with a cover coat or overcoat 130 using a drop on demand ink jet printer.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 3, 4, 8, 9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wen as applied to claims 2 and 14 above, and further in view of Kyser et al (U.S. Patent 3,946,398).

The teachings of Wen as they apply to claims 2 and 14 have been discussed previously (see 102 rejection). Though Wen teaches that the image was applied using a first drop on demand ink jet printer and that the cover coat was applied using a second drop on demand ink jet

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printer, Wen is silent of the operation frequency of each printer, the operation pressure of each printer and the nozzle orifice size of each printer.

Kyser et al teaches a drop on demand ink jet printer and method of using (Abstract).

Kyser et al teaches that it is known within the art that a sufficient amount of pressure must be supplied to the ink to assure a continuous flow of ink at the nozzle (Column 1 Lines 50-61).

Kyser et al further teaches that the drop size of the ink is a function of the diameter of the nozzle orifice (Column 4 Lines 26-27). Furthermore, Kyser et al teaches that the frequency with which the droplets are released is controlled by the operational frequency of the printer (Column 6 Lines 6-16). Thus Kyser et al teaches that the nozzle orifice size, the operational frequency and the operational pressure of the jet printers are known cause effective variables.

It has been determined that it would have been obvious to one having ordinary skill in the art to have determined the optimum values of cause effective variables through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990)

Thus at the time the present invention was made it would have been obvious to one of ordinary skill in the art to determine optimum nozzle orifice sizes through routine experimentation thus achieving nozzle orifice sizes of between 125 and 500 micrometers for both the first and second drop on demand ink jet printers.

Furthermore, at the time the present invention was made it would have been obvious to one of ordinary skill in the art to determine optimum operational frequencies for each printer through routine experimentation thus achieving a frequency of between 2 and 4 kHz for the first

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drop on demand ink jet printer and a frequency of between 600 and 2000 Hz for the second drop on demand ink jet printer.

Furthermore, at the time the present invention was made it would have been obvious to one of ordinary skill in the art to determine an optimum operational pressure for the second drop on demand ink jet printer (i.e. the one used to coat the image) thus achieving a pressure of 3 Bar for each printer.

Furthermore, applicant discloses within the specification of the present case (Page 13 Lines 4-10) that drop on demand ink jet printers that operate at pressures of 3 to 5 Bar using nozzle orifices of 200 to 500 micrometers are known within the art and were commercially available at the time the present invention was made.

Conclusion

Claims 1 through 4, 8, 9 and 13 through 16 have been rejected. Claims 5 through 7, 10 through 12 and 17 through 19 have been objected to. No claims have been allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wiczorek whose telephone number is (571)270-5341. The examiner can normally be reached on Monday through Friday; 7:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MPW/

/Michael Wieczorek/
Examiner, Art Unit 1792

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792